

### REMARKS

Claims 1, 4, and 19 have been amended. Support for these amendments may be found throughout the specification and claims as originally filed, for example, in paragraphs [0028], [0037], [0039], and [0047] of this application as published (US 2007/0065560). Claims 2 and 21 have been canceled, and Claim 20 remains canceled. Claims 1, 3-19, and 22-26 will be pending after entry of the present amendments.

#### Rejections under 35 U.S.C. § 112

Claim 4 stands rejected under 35 U.S.C. § 112, ¶ 2, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner found that it was unclear whether "0.05-0.75" is a ratio of whey protein to casein or a range of a non-clearly defined ratio, and that it is unclear what the ratio is based upon. Claim 4 has been amended to clarify that the ratio by weight of whey protein to casein is within the range of 0.05:1 to 0.75:1. Applicants therefore respectfully request that this rejection be withdrawn.

#### Rejections under 35 U.S.C. § 102(b)

Claims 1-4, 8-11, 16-19, and 21-26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Vandeweghe et al. (U.S. 2001/0043967) (hereinafter "Vandeweghe") as evidenced by several secondary references.

To sustain an anticipation rejection under 35 U.S.C. § 102(b), the Examiner must show that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. § 2131 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). Applicants respectfully submit that the cited references do not teach each and every element of the rejected claims.

As amended, independent Claims 1 and 19 recite processes comprising "adjusting the pH, if required, to a preselected point in the range 5.0-8.0 by direct addition of an alkali or acidulant." Claims 1 and 19 have additionally been amended to clarify that the pH of the cooked product is

reduced to a pH in the range of 4.5-7.5 by addition of a food-grade acid, and that the final product is a cheese or cheese-like product. The recitations of a yoghurt and a dairy dessert in the preamble have also been removed.

Vanderweghe teaches a process for decreasing the time required for production of yoghurt. Vanderweghe's entire disclosure focuses on yoghurt-making processes, and indeed, the Examiner has not cited any portion of Vanderweghe as teaching a process to make cheese or a cheese-like product. Cheese and yoghurt are distinct products with different characteristics and thus are made by different types of processes that require different considerations. As a result, Vanderweghe does not provide any teaching related to methods for preparing a cheese or a cheese-like product, much less one that is carried out without removing whey. Consequently, Vanderweghe does not teach each and every element of independent Claims 1 and 19.

In addition, Vanderweghe does not teach adjusting the pH to a preselected point in the range 5.0-8.0, if required, by direct addition of an alkali or acidulant, followed by cooking and then reducing the pH of the cooked product to a pH in the range of 4.5-7.5 by addition of a food-grade acid. As taught by Vanderweghe, the pH of the yoghurt is adjusted first by fermentation. A food-grade acid may subsequently be added to further lower the pH. (Vanderweghe, ¶¶ [0013], [0018], [0033]). In particular, Vanderweghe teaches that the "yogurt is fermented with the bacterial culture until the pH of the yogurt reaches a pH of about 4.8 to about 5.2." (*Id.* at ¶ [0033]). Only then may food-grade acid be added to further reduce the pH to about 4.6 or less. Therefore, unlike Applicants' Claims 1 and 19, Vanderweghe utilizes fermentation to reduce the pH to about 4.8-5.2, not the addition of an alkali, acidulant, or food-grade acid.

Nor would it be obvious to modify the method of Vanderweghe to arrive at the claimed invention. Again, Vanderweghe is only concerned with a method for producing yoghurt. Those methods do not provide any reason to modify a cheese-making process such that whey is not removed, or to include the other features of the claims. In addition, Applicants note that milk products with equivalent textural attributes to those of fermented yoghurts cannot be produced by direct acidification of heated milk. As Vanderweghe explains, low acidification is required to first form a gel, and the direct acidification is done after the gel/coagulation is formed. Fermentation is required to reduce the pH to below about 5.2 (see ¶ [0018] of Vanderweghe), and it is well known that heated milks used in yoghurt manufacture at temperatures of 105F to 115F

will have already formed a gel. Direct acidification is used only to speed up the acidification process after the gel has formed. (See, e.g., gelation times and pH levels in Table 1 for 85° C preheating, W.-J. Lee and J.A. Lucey, "Impact of Gelation Conditions and Structural Breakdown on the Physical and Sensory Properties of Stirred Yogurts," *J. Dairy Sci.*, 89:2374-2385 (2006)). Again, unlike Vanderweghe, the claimed processes not utilize a slow acidification process by fermentation.

Applicants therefore respectfully submit that Claims 1 and 19 are not anticipated, or otherwise made obvious, by the cited references.

Each of Claims 3-4, 8-11, 16-18, and 22-26 are dependent either directly or indirectly on Claims 1 or 19. Although Applicants have not addressed all the issues of Claims 3-4, 8-11, 16-18, and 22-26, Applicants respectfully submit that Applicants do not necessarily agree with the characterizations and assessments of these claims made by the Examiner, and it is believed that each claim is patentable on its own merits. However, these dependent claims incorporate by reference all the limitations of the claim to which they refer. As discussed above, independent Claims 1 and 19 are patentable over the cited art. Therefore, these dependent claims are allowable for at least the same reasons as discussed in connection with the claims above.

Rejections under 35 U.S.C. § 103(a)

Claims 1-18 and 21-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ottenhof (EP 0 162 498) as evidenced by several secondary references. Claim 19 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ottenhof in view of Hormann et al. (US 6,036,979).

In order to provide a *prima facie* showing of obviousness under 35 U.S.C. § 103(a), all of the claim limitations must be taught or suggested by the prior art. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q. 2d 1438 (Fed. Cir. 1991). Here, not all of the claim limitations are taught, suggested, or are otherwise obvious over the cited art references, whether alone or in combination.

Amended Claims 1 and 19 recite a process for preparing a cheese or a cheese-like product *without removing whey*. As the Examiner appears to recognize, Ottenhof's process teaches the removal of whey from the composition. Ottenhof explains that the "curd can be separated in a known manner," and, for cottage cheese, the curd is separated after acidifying. (Ottenhof, p. 4,

lines 24-35; p. 6, line 31). Moreover, it is well-known in the art of cheese manufacture that the whey is normally removed from the cheese composition in the final cheese product. Because Ottenhof discloses the removal of whey (*e.g.*, by separation from the curd), Ottenhof teaches away from a process for preparing cheese *without removing whey*.

Nor has the Examiner cited any evidence or art that discloses a cheese making process that does not remove whey. The Examiner asserts that because Ottenhof teaches a process for making cottage cheese, it would be obvious to keep the whey with the curds because cottage cheeses, curds and whey, sour milks, and yogurt products do not remove the whey. As an initial matter, Applicants respectfully submit that curds and whey, sour milks, and yogurts are not cheese or cheese-like products as recited in Claims 1 and 19. Indeed, a “cheese-like product” is one that imparts to a consumer the sensation of consuming cheese. (Application, ¶ [0037]). Applicants respectfully submit that curds and whey, sour milks, and yogurts are therefore not cheese or cheese-like products. As mentioned above, in typical cheese processes, the whey is removed from the composition. A cheese-making process that does not remove whey would not be obvious to a person of skill in the art, because there would be no reason to do so. In addition, because of different process considerations, there would be no expectation of success in modifying a process used to make curds and whey, sour milks, and yogurts to make cheese. Therefore, Applicants respectfully submit that Claims 1 and 19 are not obvious over the cited references.

The Examiner further asserts that cottage cheese is made by processes that do not remove whey. Yet even the Ottenhof reference itself teaches that its cottage cheese making process separates the curd from the whey. (Ottenhof, p. 6, line 31). In addition, Applicants submit that removing whey is conventional in cottage cheese manufacture. See, for example, the conventional method of making cottage cheese as presented in Chapter 14 of the Dairy Processing Handbook, Second Edition, 2003, Tetra Pak Processing Systems AB (hereinafter the “Dairy Handbook”), which is submitted with an Information Disclosure Statement filed herewith. As the Dairy Handbook explains on p. 340, “a certain volume of whey is drained off to make room for a corresponding volume of washing and cooling water.” Moreover, the conventional apparatus shown in Fig. 14.46 illustrates a whey strainer as parts 2 and 3 that may be used to remove whey. Thus, conventional processes for making cottage cheese do remove whey.

Accordingly, the teachings of Ottenhof itself, and the Dairy Handbook, all teach a cottage cheese process where whey is removed. There is simply no reason for a skilled artisan to deviate from the typical process that removes whey. As M.P.E.P. § 2143.03(A) notes, “[i]t is never appropriate to rely solely on ‘common knowledge’ in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based.” The Examiner asserts that it would be obvious to one of skill in the art to keep the whey with the curds. However, the Examiner has not cited any evidence to support the contention that whey would not be removed in a cheese making process. Given the evidence presented, Applicants respectfully submit that it would not be obvious to a person of skill in the art to modify Ottenhof such that whey is not removed in the process.

In addition, even assuming *arguendo* that Ottenhof could and would be modified such that whey is not removed, the cottage cheese making process of Ottenhof is quite different from the process claimed in Claims 1 and 19 in other respects. For example, even if Ottenhof teaches that the composition is acidified, nothing in Ottenhof requires the acidification to be performed by a *food-grade acid*, as recited in Claims 1 and 19. As mentioned on p. 3, lines 4-9 of Ottenhof, acidification may be done by an acid or “by means of cultures of micro-organisms.” Ottenhof thus teaches that in general, one may either use an acid or fermentation (*e.g.*, by using micro-organisms) to lower the pH. However, the skilled artisan would understand that the choice would depend on the particular circumstances; this teaching in Ottenhof is not in connection with the cottage cheese embodiment cited by the Examiner. That is, Ottenhof is not solely concerned with processes that do not remove whey, but with many different types of processes. Importantly, the teaching in Ottenhof does not indicate that fermentation and acid are equivalent or that either can be used in any process. In Ottenhof’s cottage cheese process, for example, rennet is first added, and the milk product is acidified for 16 hours. This process is acidification by a slow fermentation process rather than with the direct addition of a food-grade acid. There is no teaching of the use of a food-grade acid with Ottenhof’s cottage cheese embodiment or any reason provided to do so. To the contrary, as discussed above in the context of yoghurt, acidification by fermentation is a specific choice because of the results it produces. Therefore, even if Ottenhof’s cottage cheese process taught the other elements of Claims 1 and 19 (which Applicants believe they do not), Ottenhof does not teach or make obvious the element of Claims

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1 and 19 that the pH is reduced to the range 4.5-7.5 by addition of a food-grade acid in a process in which whey is not removed.

For the foregoing reasons, Applicants respectfully submit that independent Claims 1 and 19 are not obvious over the cited references and are in condition for allowance.

Each of Claims 3-18 and 22-26 are dependent either directly or indirectly on Claims 1 or 19. Although Applicants have not addressed all the issues of Claims 3-18 and 22-26, Applicants respectfully submit that Applicants do not necessarily agree with the characterizations and assessments of these claims made by the Examiner, and it is believed that each claim is patentable on its own merits. However, pursuant to 35 U.S.C. § 112, ¶ 4, these dependent claims incorporate by reference all the limitations of the claim to which they refer. As discussed above, independent Claims 1 and 19 are patentable over the cited art. Therefore, these dependent claims are allowable for at least the same reasons as discussed in connection with the claims above. Accordingly, each of Claims 3-18 and 22-26 are not obvious over the cited references and are in condition for allowance.

*No Disclaimers or Disavowals*

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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